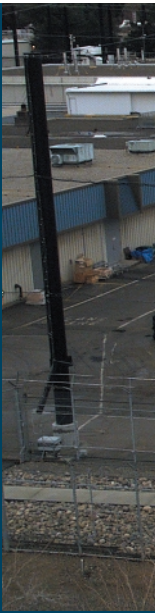


*Safety and security are the most important considerations in day-to-day operations. Protection of sensitive information, nuclear materials, and other valuable assets at the Laboratory is a critically important responsibility. So is safety. The Laboratory is committed to providing every employee and the community with a safe and healthy environment in which to work and live. We have taken steps to improve safety and ensure its top priority. Our environmental protection efforts continue to focus on pollution prevention, waste reduction, and cleanup of the Livermore site.*

*In addition, we broadly contribute to the high-tech, global-outlook atmosphere of the region. Technical expertise, science education efforts, and the many volunteer activities by Laboratory employees are important aspects of being a good neighbor.*



26

## **Secure, Safe Operations and a Good Neighbor**

### **Implementing Integrated Safety Management**

In 2000, DOE's operational concept, Integrated Safety Management (ISM), was implemented at Livermore. ISM strengthens Livermore's commitment to and

performance of safe practices in the workplace.

ISM at Livermore is based on a set of work standards that were developed in partnership with DOE's Oakland Operations Office and the University of California.

A DOE Verification Team determined that the Laboratory effectively implemented ISM. Through the hard work of the ISM implementation team and Laboratory staff, we were well prepared for final verification in September, which entailed the inspection of safety procedures at 25 facilities across the Laboratory and the review of over 700 supporting documents.

### **Upgrades to Security**

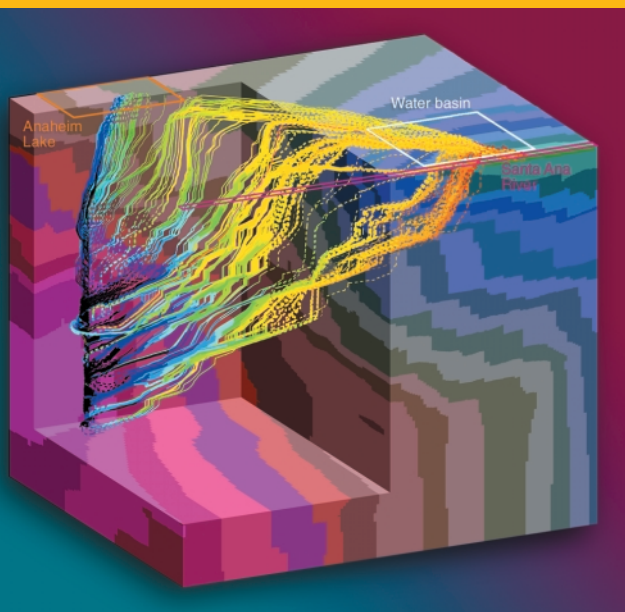
Livermore, Los Alamos, and Sandia national laboratories are expeditiously taking measures to tighten security. Protection of sensitive information and special nuclear materials is vitally important, and we are using increasingly

sophisticated measures to provide it. For example, we implemented a tri-laboratory cybersecurity plan developed with DOE. To ensure improvement in identified areas, the plan included numerous specific milestones, such as the installation of an institution-wide firewall to protect all computer systems, which was completed in March 2000.

Our computer-security upgrades build upon our efforts over the past three years to develop an overall information architecture that integrates the Laboratory's needs for both functionality and security in computing. The strategy is to not only comply with DOE orders, but also to proactively determine the computer-security needs of our institution and build the necessary computer-security practices and technologies into our infrastructure.

### **Environmentally Responsible Operations**

The 1999 Site Annual Environmental Report, released in November 2000, concludes that



The Laboratory aided the Orange County, California, Water District by calculating "backward travel" of water between a production well (at left) and three recharge basins at ground level (upper right). Yellow and orange portions of the color-coded water travel time indicate that the recharged water would stay underground long enough for the water district's needs.



In addition to cybersecurity improvements, the Laboratory made important physical and technical upgrades to the security of the Superblock, which contains the plutonium facility, to provide even greater protection against attempted intrusions.



Portable treatment units contribute to the remediation of groundwater beneath the Laboratory, which was contaminated with volatile organic compounds during early operations. These units are just as effective yet cost only 40 percent of fixed treatment facilities and attendant pipelines.

27

Laboratory operations posed no threat to the environment for the year. We continually monitor the air and wastewater from the Laboratory and test soil samples for radioactive and hazardous materials. Through efforts in waste minimization and pollution prevention, we have increased the amount of recycling and diversion of wastes from disposal. Remediation activities continue to remove volatile organic compounds from offsite groundwater such that contaminated plumes have been pulled back to just beyond the Laboratory's western boundary.

### Meeting California's Needs

From analyzing the consequences of seismic activity to developing technologies to monitor movement and remediation of contaminated groundwater, Livermore pursues technological innovations that apply to important issues in California. For example, we

are working with Los Alamos on a Wildfire Behavior Prediction Initiative. The effort combines Los Alamos' ongoing wildfire modeling effort with weather models at Livermore's National Atmospheric Release Advisory Center (NARAC). The goal is to develop a computer simulation capability that will support firefighters in real time by predicting the behavior of wildfires and weather. We are applying our current models to simulate the smoke behavior from prescribed burns in Los Angeles County (for the L.A. County Fire Department) and are preparing to support prescribed burns at Fort Ord, California (for the Army). In addition, we are working with the East Bay Regional Park District to study wildfire scenarios in the hills of Oakland, California, using a high-resolution database.

### Laboratory Employees Donate \$1.26 Million

The annual campaign to Help Others More Effectively (HOME) raised \$1.26 million

for Bay Area and Central Valley charity organizations in 2000, breaking the previous year's record. HOME is but one example of many outreach activities that include employee participation in community economic development organizations; environmental, health, and safety working groups; and educational activities such as science fairs and student and teacher programs.

The database for studies of wildfire scenarios in the hills of Oakland, California, includes detailed information about roads, terrain, and vegetative fuels as well as the roof and siding materials used in each of 51,452 houses in the area.

